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ASSESSMENT REPORT

Report No.: 29974IDT.001

REPORT ON: RF EXPOSURE ASSESSMENT OF THE F3607gw ERICSSON

MOBILE BROADBAND MODULE INSTALLED IN GENERIC HOST PLATFORMS COVERING 7 DIFFERENT COLLOCATION

SCENARIOS.

Product : Ericsson Mobile Broadband Module

Trade Mark : Ericsson **Model** : F3607gw

FCC ID: : VV7-MBMF3607GW1

Manufacturer: Ericsson ABRequested by: Ericsson AB

Host Platform: Generic host platforms covering 7 different collocation

scenarios

Standard(s) : OET Bulletin 65 Edition 97-01 August 1997

FCC 47 CFR § 1.1307 FCC 47 CFR § 1.1310

1999/519/EC

Radiocommunications (Electromagnetic Radiation -

Human Exposure) Standard 2003

ARPANSA RPS No. 3

AS 2772.2-1998:Radiofrequency radiation - Part 2

Vodafone requirements [1999/519/EC]

This test report includes 2 annexes and therefore, the total number of pages is 36.

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Issued by: Approved by:

Date: 2009/06/23 Date: 2009/06/23

Ricardo Orejas Juan Carlos Mora Worldwide Compliance Technical Manager

Date: 2009-06-23 Engineer Laboratories Division Page: 1 of 36



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1. COMPETENCE AND GUARANTEES

AT4 wireless is a testing laboratory competent to carry out the evaluation described in this report.

AT4 wireless guarantees the reliability of the data presented in this report, which is based on the information available at AT4 wireless at the time of performance of the evaluation.

AT4 wireless is liable to the client for the maintenance of the confidentiality of all information related to the item under review and the results of such evaluation

2. GENERAL CONDITIONS

- 1. This report refers only to the item that has undergone the evaluation as described in Annex A of this report according to the information provided by the applicant.
- 2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
- 3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
- 4. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

3. CHARACTERISTICS OF THE EVALUATION

3.1. SERVICES REQUESTED

RF exposure assessment of the F3507g Ericsson Mobile Broadband Module installed in generic host platforms covering 7 different collocation scenarios according to:

Requirements	Frequency bands
OET Bulletin 65 Edition 97-01 August 1997 - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields	
FCC 47 CFR § 1.1307 - Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.	GSM 850, FDD V, PCS 1900, FDD II
FCC 47 CFR § 1.1310 - Radiofrequency radiation exposure limits.	
1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)	E-GSM 900, DCS 1800, FDD I

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Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003 ARPANSA RPS No. 3 – Maximum Exposure Levels to Radiofrequency Fields (3 kHz to 300 GHz)	FDD V, E-GSM 900, DCS 1800, FDD I
AS 2772.2-1998: Radiofrequency radiation - Part 2: Principles and methods of measurement - 300 kHz to 100 GHz	
Vodafone requirements [1999/519/EC]	GSM 850, FDD V, FDD VI, E-GSM 900, DCS 1800, PCS 1900, FDD II, FDD I

3.2. REQUIREMENTS AND METHOD

The evaluation has been carried out according to the following documents and standards:

Requirements	Frequency bands
OET Bulletin 65 Edition 97-01 August 1997 - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields	
FCC 47 CFR § 1.1307 - Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.	GSM 850, FDD V, PCS 1900, FDD II
FCC 47 CFR § 1.1310 - Radiofrequency radiation exposure limits.	
1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)	E-GSM 900, DCS 1800, FDD I
Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003	
ARPANSA RPS No. 3 – Maximum Exposure Levels to Radiofrequency Fields (3 kHz to 300 GHz)	FDD V, E-GSM 900, DCS 1800, FDD I
AS 2772.2-1998: Radiofrequency radiation - Part 2: Principles and methods of measurement - 300 kHz to 100 GHz	
Vodafone requirements [1999/519/EC]	GSM 850, FDD V, FDD VI, E-GSM 900, DCS 1800, PCS 1900, FDD II, FDD I

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4. IDENTIFICATION DATA SUPPLIED BY THE APPLICANT

Identification data included in this section has been supplied by the client.

4.1. APPLICANT

Name / Company: Ericsson AB

V.A.T. Registration number: 556056-625801

Address: Lindholmspiren 11, SE-417 56 Goteborg

Country: Sweden

4.2. REPRESENTATIVE

Name: Pelle Hellberg

Address: Lindholmspiren 11, SE-417 56 Goteborg

Country: Sweden

4.3. IDENTIFICATION OF ITEM/ITEMS EVALUATED

Product: Ericsson Mobile Broadband Module

Trade mark: Ericsson Model: F3607gw FCC ID: VV7-MBMF3607GW1

Manufacturer: Ericsson AB

Country of manufacture: China

Host platform: Generic host platforms covering 7 different collocation scenarios

Description: 2G (GSM/GPRS/EDGE Class 10: 850/900/1800/1900 MHz) and 3G

(HSDPA/HSUPA/WCDMA Release 6: FDD I, FDD II, FDD V, FDD VI) module installed in generic host platforms covering 7 different collocation scenarios.

5. EVALUATION RESULTS

Abbreviations used in the VERDICT column of the following tables are:

C Compliant with requirements

NC Not Compliant with requirements

NA Not Applicable

NE Not Evaluated

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5.1. RESULTS FOR ITEM EVALUATED TRANSMITTING ALONE

DOCUMENT/STANDARD -		VERDICT		
		C	NC	NE
OET Bulletin 65 Edition 97-01 August 1997 - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields		C		
FCC 47 CFR § 1.1307 - Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.		С		
FCC 47 CFR § 1.1310 - Radiofrequency radiation exposure limits.				
1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)		C		
Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003				
ARPANSA RPS No. 3 – Maximum Exposure Levels to Radiofrequency Fields (3 kHz to 300 GHz)		С		
AS 2772.2-1998: Radiofrequency radiation - Part 2: Principles and methods of measurement - 300 kHz to 100 GHz				
Vodafone requirements [1999/519/EC]		С		

5.2. RESULTS FOR ITEM EVALUATED TRANSMITTING SIMULTANEOUSLY WITH OTHER COLLOCATED TRANSMITTERS

DOCUMENT/STANDARD -		VERDICT		
		C	NC	NE
OET Bulletin 65 Edition 97-01 August 1997 - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields		0		
FCC 47 CFR § 1.1307 - Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.		С		
FCC 47 CFR § 1.1310 - Radiofrequency radiation exposure limits.				
1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)		C		
Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003				
ARPANSA RPS No. 3 – Maximum Exposure Levels to Radiofrequency Fields (3 kHz to 300 GHz)		C		
AS 2772.2-1998: Radiofrequency radiation - Part 2: Principles and methods of measurement - 300 kHz to 100 GHz				
Vodafone requirements [1999/519/EC]		C		•

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6. REMARKS AND COMMENTS

GSM and GPRS modes have been evaluated together because both modes share the same power class and modulation scheme in the uplink.

WCDMA and HSDPA modes have been evaluated together because HSDPA is an improved mode of operation only for Downlink (equipment reception), but using the normal WCDMA mode for the Uplink (equipment transmission).

The equipment is also commercialised under other FCC ID with the following structure:

FCC ID: VV7-MBMF3607GW1-X

Where X is a letter identifying variants of the product.

Providing the changes in these variants do not affect to certified parameters, this report will be also applicable to them.

7. SUMMARY

Considering the results of the performed analysis and evaluation, stated in annexes A and B, the item under evaluation is **IN COMPLIANCE** with the specifications listed in section 3.1 "SERVICES REQUESTED".

NOTE: The results presented in this report apply only to the particular item under evaluation established in section "4.3. IDENTIFICATION OF ITEM/ITEMS EVALUATED" of this document, as presented for evaluation by the applicant.

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ANNEX A

HOST PLATFORMS ANALYSIS

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A.1. SCENARIO 1

Scenario 1 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a Bluetooth transmitter (F3607gw antenna-to-Bluetooth antenna distance < 20 cm) which is also in mobile exposure conditions. Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSWI 650	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
FDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
LDD A1	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSM 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DCS 1600	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
FCS 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
וו טטז	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
LOD I	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

Bluetooth transmitter:

Type of equipment : Bluetooth ¹

Trade mark : Any Model : Any FCC ID : Any

Output power : See table below

Scenario 1								
Type of transmitter Maximum EIRP (mW) Duty Cycle EIRP (m'								
Bluetooth	100	76%	76,43					

¹ It could be also Bluetooth + UWB transmitter)
UWB contribution does not need to be considered.

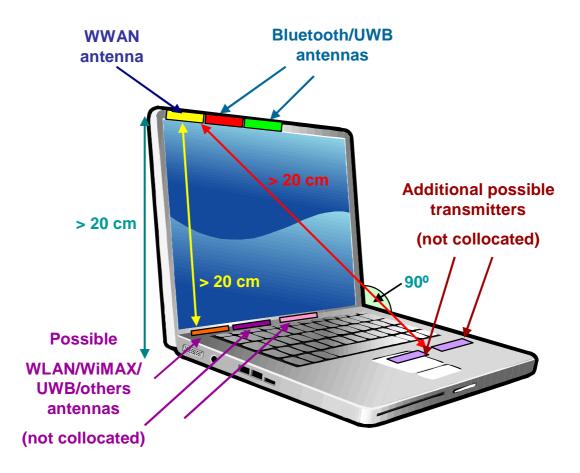
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WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Bluetooth EIRP: 100 mW
 - Any Bluetooth (or Bluetooth + UWB) transmitter with EIRP below 100 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - O Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.

SAMPLE CONFIGURATION:



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A.2. SCENARIO 2

Scenario 2 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WLAN transmitter (F3607gw antenna-to-WLAN antenna distance < 20 cm) which is also in mobile exposure conditions.

WLAN transmitter may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSIVI 650	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
TDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
FDD VI	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-G5W 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DC5 1000	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
1 C3 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
LDD II	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
FDD I	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

WLAN transmitter:

Type of equipment : WLAN²
Trade mark : Any
Model : Any
FCC ID : Any

Output power : See table below

Scenario 3							
Type of transmitter Maximum EIRP (mW) Duty Cycle EIRP (mW							
WLAN	2000	100%	2000,00				

² It could be also WLAN/WiMAX combo transmitter where WLAN and WiMAX transmitters do not transmit simultaneously.

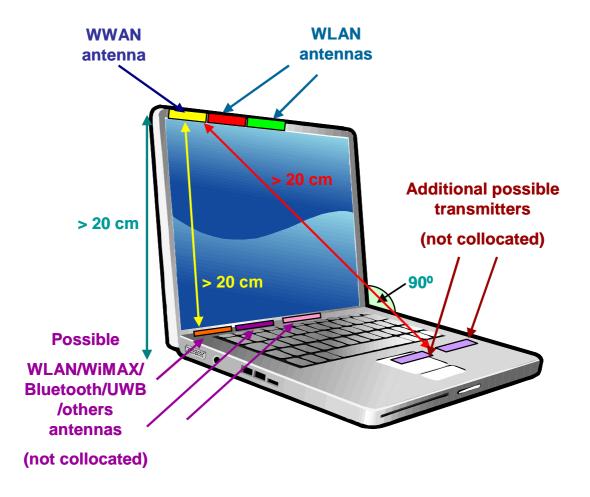
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WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WLAN EIRP: 2000 mW
 - o Any WLAN transmitter with EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.

SAMPLE CONFIGURATION:



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A.3. SCENARIO 3

Scenario 3 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WLAN transmitter and a Bluetooth transmitter (F3607gw antenna-to-WLAN/Bluetooth antenna distance < 20 cm) which are also in mobile exposure conditions.

WLAN transmitter may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
USIVI 650	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
TDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
TDD VI	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSM 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DC3 1800	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
1 C3 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
I DD II	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
ו עשיו	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

WLAN transmitter:

Type of equipment : WLAN³
Trade mark : Any
Model : Any
FCC ID : Any

Output power : See table below

Scenario 3							
Type of transmitter Maximum EIRP (mW) Duty Cycle EIRP (mW							
WLAN	2000	100%	2000,00				

³ It could be also WLAN/WiMAX combo transmitter where WLAN and WiMAX transmitters do not transmit simultaneously.

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Bluetooth transmitter:

Type of equipment : Bluetooth ⁴

Trade mark : Any Model : Any FCC ID : Any

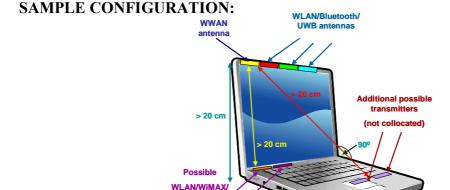
Output power : See table below

Scenario 3						
Type of transmitter	Maximum EIRP (mW)	Duty Cycle	EIRP (mW)			
Bluetooth	100	76%	76,43			

⁴ It could be also Bluetooth + UWB transmitter)
UWB contribution does not need to be considered.

WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WLAN EIRP: 2000 mW
 - o Any WLAN transmitter with EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Bluetooth EIRP: 100 mW
 - O Any Bluetooth (or Bluetooth + UWB) transmitter with EIRP below 100 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.



Bluetooth/UWB additional antennas (not collocated)

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A.4. SCENARIO 4

Scenario 4 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WiMAX transmitter (F3607gw antenna-to-WiMAX antenna distance < 20 cm) which is also in mobile exposure conditions.

WiMAX transmitter may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSWI 850	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
TDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
TDD VI	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSW 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DCS 1600	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
FCS 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
FDD II	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
ו ממז	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

WiMAX transmitter:

Type of equipment : WiMAX⁵
Trade mark : Any
Model : Any
FCC ID : Any

Output power : See table below

Scenario 4						
Type of transmitter	Maximum EIRP (mW)	Duty Cycle	EIRP (mW)			
WiMAX	2000	100%	2000,00			

⁵ It could be also WLAN/WiMAX combo transmitter where WLAN and WiMAX transmitters do not transmit simultaneously.

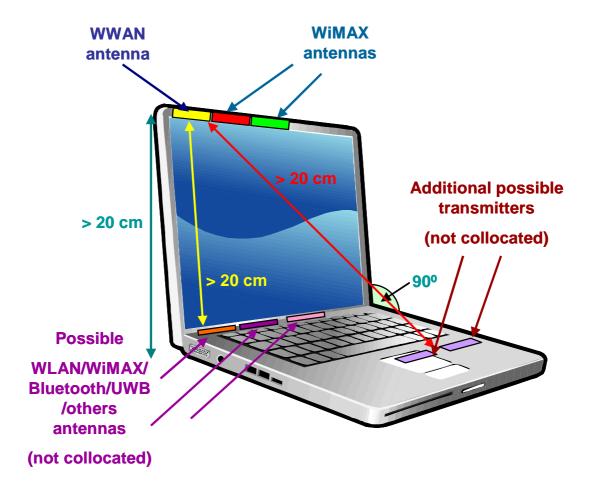
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WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WiMAX EIRP: 2000 mW
 - o Any WiMAX transmitter with EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.

SAMPLE CONFIGURATION:



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A.5. SCENARIO 5

Scenario 5 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WiMAX transmitter and a Bluetooth transmitter (F3607gw antenna-to-WiMAX/Bluetooth antenna distance < 20 cm) which are also in mobile exposure conditions.

WiMAX transmitter may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSWI 650	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
FDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
TDD VI	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSM 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DC3 1800	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
FCS 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
I DD II	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
LUUI	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

WiMAX transmitter:

Type of equipment : WiMAX ⁶
Trade mark : Any
Model : Any
FCC ID : Any

Output power : See table below

Scenario 5						
Type of transmitter	Maximum EIRP (mW)	Duty Cycle	EIRP (mW)			
WiMAX	2000	100%	2000,00			

⁶ It could be also WLAN/WiMAX combo transmitter where WLAN and WiMAX transmitters do not transmit simultaneously.

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Bluetooth transmitter:

Type of equipment : Bluetooth ⁷

Trade mark : Any Model : Any FCC ID : Any

Output power : See table below

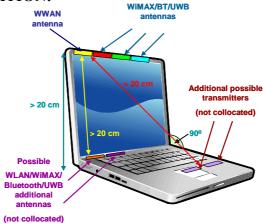
Scenario 5						
Type of transmitter	Maximum EIRP (mW)	Duty Cycle	EIRP (mW)			
Bluetooth	100	76%	76,43			

⁷ It could be also Bluetooth + UWB transmitter)
UWB contribution does not need to be considered.

WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WiMAX EIRP: 2000 mW
 - o Any WiMAX transmitter with EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Bluetooth EIRP: 100 mW
 - O Any Bluetooth (or Bluetooth + UWB) transmitter with EIRP below 100 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - O Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.

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A.6. SCENARIO 6

Scenario 6 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WLAN transmitter and a WiMAX transmitter (F3607gw antenna-to-WLAN/WiMAX antenna distance < 20 cm) which are also in mobile exposure conditions.

WLAN/WiMAX transmitters may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSIM 920	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
rdd v	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
LDD AI	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSM 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DC3 1800	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
FCS 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
וו טטז	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
ו מעז	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

ADDITIONAL/SECONDARY TRANSMITTERS:

WLAN/WiMAX transmitter:

Type of equipment : WLAN / WiMAX

Trade mark : Any Model : Any FCC ID : Any

Output power : See table below

Scenario 6					
Type of transmitter Maximum EIRP (mW) Duty Cycle EIRP (mW)					
WLAN	2000 8	100%	2000,00		

⁸ Aggregated EIRP of WLAN and WiMAX transmitters

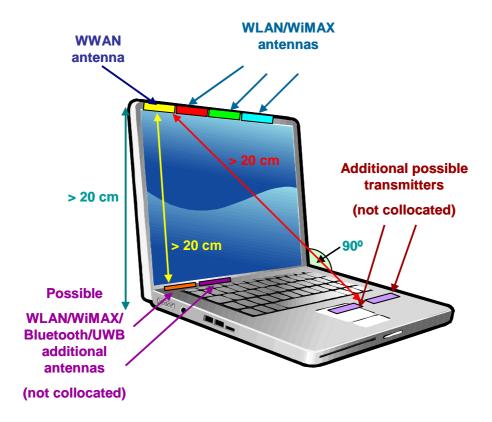
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WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WLAN EIRP + WiMAX EIRP: 2000 mW
 - Any WLAN transmitter and WiMAX transmitters with aggregated EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.

SAMPLE CONFIGURATION:



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A.7. SCENARIO 7

Scenario 6 covers a host device where the F3607gw Ericsson Mobile Broadband Module is in mobile exposure conditions (antenna-to-user distance > 20 cm) and it is collocated with a WLAN transmitter a WiMAX transmitter and a Bluetooth transmitter (F3607gw antenna-to-WLAN/WiMAX/Bluetooth antenna distance < 20 cm) which are also in mobile exposure conditions.

WLAN/WiMAX transmitters may have other antennas in portable exposure conditions but they are not collocated with F3607gw Ericsson Mobile Broadband Module antenna.

Other transmitters may be installed in the same host platform but they are not collocated with F3607gw Ericsson Mobile Broadband Module.

MAIN/PRIMARY TRANSMITTER:

WWAN transmitter:

Type of equipment : Ericsson Mobile Broadband Module

Trade mark : Ericsson Model : F3607gw

FCC ID : VV7-MBMF3507GW1

Maximum antenna gain : Low bands: 3.35 dBi // High bands: 4.7 dBi

Output power : See table below

Frequency Band	Mode	Frequency range (MHz)	Maximum conducted output power (dBm)	Maximum conducted output power (mW)	Duty Cycle	Equivalent conducted output power (mW)	Maximum antenna gain (dBi)	Maximum antenna gain (numerical)	EIRP (mW)
GSM 850	GSM/GPRS	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
GSIVI 650	EDGE	824,2 - 848,8	33,51	2243,88	25%	560,97	3,35	2,16	1213,22
FDD V	WCDMA/HSDPA	826,4 - 846,6	23,17	207,30	100%	207,30	3,35	2,16	448,33
FDD V	HSUPA	826,4 - 846,6	21,34	136,14	100%	136,14	3,35	2,16	294,44
FDD VI	WCDMA/HSDPA	832,4 - 837,6	23,26	211,69	100%	211,69	3,35	2,16	457,83
LDD A1	HSUPA	832,4 - 837,6	20,76	119,18	100%	119,18	3,35	2,16	257,75
E-GSM 900	GSM/GPRS	880,2 - 914,8	32,60	1819,70	25%	454,93	3,35	2,16	983,88
E-GSW 900	EDGE	880,2 - 914,8	27,90	616,60	25%	154,15	3,35	2,16	333,38
DCS 1800	GSM/GPRS	1710,2 - 1784,8	29,80	954,99	25%	238,75	4,70	2,95	704,60
DC3 1800	EDGE	1710,2 - 1784,8	27,10	512,86	25%	128,22	4,70	2,95	378,39
PCS 1900	GSM/GPRS	1850,2 - 1909,8	30,11	1025,65	25%	256,41	4,70	2,95	756,73
FCS 1900	EDGE	1850,2 - 1909,8	30,09	1020,94	25%	255,23	4,70	2,95	753,25
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	23,30	213,89	100%	213,89	4,70	2,95	631,25
וו טטז	HSUPA	1852,4 - 1907,6	20,79	119,89	100%	119,89	4,70	2,95	353,83
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	22,49	177,21	100%	177,21	4,70	2,95	523,00
LOD I	HSUPA	1922,4 - 1977,6	20,67	116,73	100%	116,73	4,70	2,95	344,51

WLAN/WiMAX transmitter:

Type of equipment : WLAN / WiMAX

Trade mark : Any Model : Any FCC ID : Any

Output power : See table below

Scenario 6					
Type of transmitter Maximum EIRP (mW) Duty Cycle EIRP (mW)					
WLAN	2000 9	100%	2000,00		

⁹ Aggregated EIRP of WLAN and WiMAX transmitters

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Bluetooth transmitter:

Type of equipment : Bluetooth ¹⁰

Trade mark : Any Model : Any FCC ID : Any

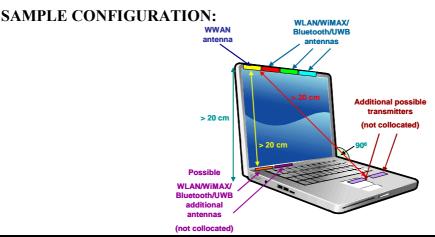
Output power : See table below

Scenario 5					
Type of transmitter	Maximum EIRP (mW)	Duty Cycle	EIRP (mW)		
Bluetooth	100	76%	76,43		

¹⁰ It could be also Bluetooth + UWB transmitter) UWB contribution does not need to be considered.

WORST CASE CONSIDERATIONS:

- Antenna-to-user distance: 20 cm.
 - Any antenna-to-user distance > 20 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- F3607gw antenna gains: Low bands: 3.35 dBi // High bands: 4.7 dBi
 - o Any antenna gains below the specified would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- WLAN EIRP + WiMAX EIRP: 2000 mW
 - Any WLAN transmitter and WiMAX transmitters with aggregated EIRP below 2000 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Bluetooth EIRP: 100 mW
 - Any Bluetooth (or Bluetooth + UWB) transmitter with EIRP below 100 mW would be covered by the analysis included in this report as far as it would provide better exposure conditions.
- Antenna-to-antenna distances: 0 cm
 - Any antenna-to-antenna distance > 0 cm would be covered by the analysis included in this report as far as it would provide better exposure conditions.



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ANNEX B

RF EXPOSURE ASSESSMENT

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B.1. MAXIMUM PERMISSIBLE EXPOSURE (MPE) LIMITS

B.1.1. FCC LIMITS

Normative documents:

- OET Bulletin 65 Edition 97-01 August 1997 Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
- FCC 47 CFR § 1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.
- FCC 47 CFR § 1.1310 Radiofrequency radiation exposure limits.1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

Reference levels:

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure:

Frequency Range (MHz)	Power density $(\frac{W}{m^2})$	Averaging time (minutes)
300 – 1500	$\frac{f(MHz)}{1500}$	30
1500 - 100.000	1.0	30

MPE limits:

- Main/Primary transmitter (F3607gw Ericsson Mobile Broadband Module):

Frequency Band	Mode	Frequency Range (MHz)	Reference frequency (MHz)	$MPE \ limit (S_{eq}) \\ (\frac{mW}{cm^2})$
GSM 850	GSM/GPRS	824,2 - 848,8	824,20	0,5495
GSW 830	EDGE	824,2 - 848,8	824,20	0,5495
FDD V	WCDMA/HSDPA	826,4 - 846,6	826,40	0,5509
	HSUPA	826,4 - 846,6	826,40	0,5509
PCS 1900	GSM/GPRS	1850,2 - 1909,8	1850,20	1,0000
PCS 1900	EDGE	1850,2 - 1909,8	1850,20	1,0000
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	1852,40	1,0000
	HSUPA	1852,4 - 1907,6	1852,40	1,0000

- Additional/Secondary transmitters: All the transmission frequencies for collocated transmitter modules are above 1.5 GHz, so that the MPE limit is 1 mW/cm².

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B.1.2. EUROPEAN UNION MPE LIMITS

Normative document:

- 1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

Reference levels:

The table below is excerpted from Table 2 of 1999/519/EC, titled "Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)":

Frequency range	E-field strength $(\frac{V}{m})$	H-field strength $(\frac{A}{m})$	B-field (μT)	Equivalent plane wave power density S_{eq} $(\frac{W}{m^2})$
400 - 2000 MHz	$1{,}375 \cdot f(MHz)^{1/2}$	$0,0037 \cdot f(MHz)^{1/2}$	$0,0046 \cdot f(MHz)^{1/2}$	$\frac{f(MHz)}{200}$
2 - 300 GHz	61	0,16	0,2	10

MPE limits:

- Main/Primary transmitter (F3607gw Ericsson Mobile Broadband Module):

Frequency Band	Mode	Frequency Range (MHz)	Reference frequency (MHz)	$MPE limit (S_{eq}) (\frac{mW}{cm^2})$
E-GSM 900	GSM/GPRS	880,2 - 914,8	880,20	0,4401
E-GSM 900	EDGE	880,2 - 914,8	880,20	0,4401
DCS 1800	GSM/GPRS	1710,2 - 1784,8	1710,20	0,8551
DCS 1800	EDGE	1710,2 - 1784,8	1710,20	0,8551
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	1922,40	0,9612
ו עעיו	HSUPA	1922,4 - 1977,6	1922,40	0,9612

- Additional/Secondary transmitters: All the transmission frequencies for collocated transmitter modules are above 2 GHz, so that the MPE limit is 1 mW/cm².

B.1.3. AUSTRALIA MPE LIMITS

Normative documents:

- Radiocommunications (Electromagnetic Radiation Human Exposure) Standard 2003
- ARPANSA RPS No. 3 Maximum Exposure Levels to Radiofrequency Fields (3 kHz to 300 GHz)
- AS 2772.2-1998: Radiofrequency radiation Part 2: Principles and methods of measurement 300 kHz to 100 GHz

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Reference levels:

The table below is excerpted from Table 7 of ARPANSA RPS No. 3, titled "Reference levels for time averaged exposure to RMS electric and magnetic fields (unperturbed rms values)":

Exposure category	Frequency range	E-field strength $(\frac{V}{m} \text{ rms})$	H-field strength $(\frac{A}{m} \text{ rms})$	Equivalent plane wave power density $\frac{S_{eq}}{\left(\frac{W}{m^2}\right)}$	Equivalent plane wave power density S_{eq} $(\frac{mW}{cm^2})$
General public	400 MHz - 2 GHz	$1{,}37\cdot f(MHz)^{1/2}$	$0,00364 \cdot f(MHz)^{1/2}$	$\frac{f(MHz)}{200}$	$\frac{f(MHz)}{2000}$
General public	2 - 300 GHz	61	0,16	10	1

MPE limits:

- Main/Primary transmitter (F3607gw Ericsson Mobile Broadband Module):

Frequency Band	Mode	Frequency Range (MHz)	Reference frequency (MHz)	$MPE \ limit \\ (S_{eq}) \\ (\frac{mW}{cm^2})$
FDD V	WCDMA/HSDPA	826,4 - 846,6	826,40	0,4132
TDD V	HSUPA	826,4 - 846,6	826,40	0,4132
E-GSM 900	GSM/GPRS	880,2 - 914,8	880,20	0,4401
E-GSWI 900	EDGE	880,2 - 914,8	880,20	0,4401
DCS 1800	GSM/GPRS	1710,2 - 1784,8	1710,20	0,8551
DCS 1800	EDGE	1710,2 - 1784,8	1710,20	0,8551
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	1922,40	0,9612
FDD1	HSUPA	1922,4 - 1977,6	1922,40	0,9612

- Additional/Secondary transmitters: All the transmission frequencies for collocated transmitter modules are above 2 GHz, so that the MPE limit is 1 mW/cm².

B.1.4. VODAFONE MPE LIMITS

Normative document:

- 1999/519/EC Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

Reference levels:

The table below is excerpted from Table 2 of 1999/519/EC, titled "Reference levels for electric, magnetic and electromagnetic fields (0 Hz to 300 GHz, unperturbed rms values)":

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Exposure category	Frequency range	E-field strength $(\frac{V}{m} \text{ rms})$	H-field strength $(rac{A}{m} \text{ rms})$	Equivalent plane wave power density $\frac{S_{eq}}{\left(\frac{W}{m^2}\right)}$	Equivalent plane wave power density S_{eq} $(\frac{mW}{cm^2})$
General public	400 MHz - 2 GHz	$1{,}37\cdot f(MHz)^{1/2}$	$0,00364 \cdot f(MHz)^{1/2}$	$\frac{f(MHz)}{200}$	$\frac{f(MHz)}{2000}$
General public	2 - 300 GHz	61	0,16	10	1

MPE limits:

- Main/Primary transmitter (F3607gw Ericsson Mobile Broadband Module):

Frequency Band	Mode	Frequency Range (MHz)	Reference frequency (MHz)	$MPE \ limit (S_{Lim}) \\ (\frac{mW}{cm^2})$
GSM 850	GSM/GPRS	824,2 - 848,8	824,20	0,4121
G5W 650	EDGE	824,2 - 848,8	824,20	0,4121
FDD V	WCDMA/HSDPA	826,4 - 846,6	826,40	0,4132
TDD V	HSUPA	826,4 - 846,6	826,40	0,4132
FDD VI	WCDMA/HSDPA	832,4 - 837,6	832,40	0,4162
TDD VI	HSUPA	832,4 - 837,6	832,40	0,4162
E-GSM 900	GSM/GPRS	880,2 - 914,8	880,20	0,4401
E-GSM 900	EDGE	880,2 - 914,8	880,20	0,4401
DCS 1800	GSM/GPRS	1710,2 - 1784,8	1710,20	0,8551
DCS 1800	EDGE	1710,2 - 1784,8	1710,20	0,8551
PCS 1900	GSM/GPRS	1850,2 - 1909,8	1850,20	0,9251
FCS 1900	EDGE	1850,2 - 1909,8	1850,20	0,9251
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	1852,40	0,9262
LDD II	HSUPA	1852,4 - 1907,6	1852,40	0,9262
EDD I	WCDMA/HSDPA	1922,4 - 1977,6	1922,40	0,9612
FDD I	HSUPA	1922,4 - 1977,6	1922,40	0,9612

- Additional/Secondary transmitters: All the transmission frequencies for WLAN and Bluetooth modules are above 2 GHz, so that the MPE limit is 1 mW/cm².

B.2. RF EXPOSURE ASSESSMENT – INDIVIDUAL TRANSMITTERS

B.2.1. INTRODUCTION

Calculations to predict power density levels in the far-field of the antenna are made by use of the following equation:

$$S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

where: $S = power density (in appropriate units, e.g. <math>mW/cm^2$)

P = power input to the antenna (in appropriate units, e.g., mW)

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G = power gain of the antenna in the direction of interest relative to an isotropic radiator <math>R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

B.2.2. RF EXPOSURE ASSESSMENT FOR F3607GW ERICSSON MOBILE BROADBAND MODULE INSTALLED IN GENERIC HOST PLATFORMS

FCC REQUIREMENTS

Frequency Band	Mode	Frequency Range (MHz)	EIRP (mW)	Evaluation distance (R) (cm)	Power Density (S _{eq}) $S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$ $\left(\frac{\mathbf{mW}}{\mathbf{cm}^2}\right)$	MPE limit (S _{Lim}) (mW/cm²)	$\begin{aligned} & \text{COMPLIANCE} \\ & (S_{eq} < S_{Lim}) \\ & (\frac{mW}{cm^2}) \end{aligned}$
GSM 850	GSM/GPRS	824,2 - 848,8	1213,22	20,00	0,2414	0,5495	COMPLIANT
USIVI 630	EDGE	824,2 - 848,8	1213,22	20,00	0,2414	0,5495	COMPLIANT
FDD V	WCDMA/HSDPA	826,4 - 846,6	448,33	20,00	0,0892	0,5509	COMPLIANT
LDD A	HSUPA	826,4 - 846,6	294,44	20,00	0,0586	0,5509	COMPLIANT
PCS 1900	GSM/GPRS	1850,2 - 1909,8	756,73	20,00	0,1505	1,0000	COMPLIANT
1 CS 1900	EDGE	1850,2 - 1909,8	753,25	20,00	0,1499	1,0000	COMPLIANT
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	631,25	20,00	0,1256	1,0000	COMPLIANT
וו טטיז	HSUPA	1852,4 - 1907,6	353,83	20,00	0,0704	1,0000	COMPLIANT

EUROPEAN UNION REQUIREMENTS

Frequency Band	Mode	Frequency Range (MHz)	EIRP (mW)	Evaluation distance (R) (cm)	Power Density (S _{eq}) $S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$ $\left(\frac{\mathbf{mW}}{\mathbf{cm}^2}\right)$		$\begin{aligned} & COMPLIANCE \\ & (S_{eq} < S_{Lim}) \\ & (\frac{mW}{cm^2}) \end{aligned}$
E-GSM 900	GSM/GPRS	880,2 - 914,8	983,88	20,00	0,1957	0,4401	COMPLIANT
E-GSM 900	EDGE	880,2 - 914,8	333,38	20,00	0,0663	0,4401	COMPLIANT
DCS 1800	GSM/GPRS	1710,2 - 1784,8	704,60	20,00	0,1402	0,8551	COMPLIANT
DC3 1800	EDGE	1710,2 - 1784,8	378,39	20,00	0,0753	0,8551	COMPLIANT
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	523,00	20,00	0,1040	0,9612	COMPLIANT
ו עעניו	HSUPA	1922,4 - 1977,6	344,51	20,00	0,0685	0,9612	COMPLIANT

AUSTRALIA REQUIREMENTS

Frequency Band	Mode	Frequency Range (MHz)	EIRP (mW)	Evaluation distance (R) (cm)	Power Density (S_{eq}) $S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$ $\left(\frac{mW}{cm^2}\right)$	MPE limit (S_{Lim}) $(\frac{mW}{cm^2})$	COMPLIANCE $(S_{eq} < S_{Lim})$ $(\frac{mW}{cm^2})$
FDD V	WCDMA/HSDPA	826,4 - 846,6	448,33	20,00	0,0892	0,4132	COMPLIANT
LDD A	HSUPA	826,4 - 846,6	294,44	20,00	0,0586	0,4132	COMPLIANT
E-GSM 900	GSM/GPRS	880,2 - 914,8	983,88	20,00	0,1957	0,4401	COMPLIANT
E-GSM 900	EDGE	880,2 - 914,8	333,38	20,00	0,0663	0,4401	COMPLIANT
DCS 1800	GSM/GPRS	1710,2 - 1784,8	704,60	20,00	0,1402	0,8551	COMPLIANT
DCS 1800	EDGE	1710,2 - 1784,8	378,39	20,00	0,0753	0,8551	COMPLIANT
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	523,00	20,00	0,1040	0,9612	COMPLIANT
ו טטיו	HSUPA	1922,4 - 1977,6	344,51	20,00	0,0685	0,9612	COMPLIANT

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VODAFONE REQUIREMENTS

Frequency Band	Mode	Frequency Range (MHz)	EIRP (mW)	Evaluation distance (R) (cm)	Power Density (S_{eq}) $S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$ $\left(\frac{\mathbf{mW}}{\mathbf{cm}^2}\right)$	MPE limit (S _{Lim}) (mW/cm²)	$\begin{aligned} & \textbf{COMPLIANCE} \\ & (S_{eq} < S_{Lim}) \\ & (\frac{mW}{cm^2}) \end{aligned}$
GSM 850	GSM/GPRS	824,2 - 848,8	1213,22	20	0,2414	0,4121	COMPLIANT
G5W 650	EDGE	824,2 - 848,8	1213,22	20	0,2414	0,4121	COMPLIANT
FDD V	WCDMA/HSDPA	826,4 - 846,6	448,33	20	0,0892	0,4132	COMPLIANT
TDD V	HSUPA	826,4 - 846,6	294,44	20	0,0586	0,4132	COMPLIANT
FDD VI	WCDMA/HSDPA	832,4 - 837,6	457,83	20	0,0911	0,4162	COMPLIANT
TDD VI	HSUPA	832,4 - 837,6	257,75	20	0,0513	0,4162	COMPLIANT
E-GSM 900	GSM/GPRS	880,2 - 914,8	983,88	20	0,1957	0,4401	COMPLIANT
E-GSWI 900	EDGE	880,2 - 914,8	333,38	20	0,0663	0,4401	COMPLIANT
DCS 1800	GSM/GPRS	1710,2 - 1784,8	704,60	20	0,1402	0,8551	COMPLIANT
DCS 1800	EDGE	1710,2 - 1784,8	378,39	20	0,0753	0,8551	COMPLIANT
PCS 1900	GSM/GPRS	1850,2 - 1909,8	756,73	20	0,1505	0,9251	COMPLIANT
FCS 1900	EDGE	1850,2 - 1909,8	753,25	20	0,1499	0,9251	COMPLIANT
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	631,25	20	0,1256	0,9262	COMPLIANT
וו טטד	HSUPA	1852,4 - 1907,6	353,83	20	0,0704	0,9262	COMPLIANT
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	523,00	20	0,1040	0,9612	COMPLIANT
ו עעז	HSUPA	1922,4 - 1977,6	344,51	20	0,0685	0,9612	COMPLIANT

B.2.3. RF EXPOSURE ASSESSMENT FOR SECONDARY TRANSMITTERS INSTALLED IN GENERIC HOST PLATFORMS

Model name	FCC ID	EIRP (mW)	Evaluation distance (cm)	Power Density (S_{eq}) $S = \frac{P \cdot G}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$ $\left(\frac{\mathbf{mW}}{\mathbf{cm}^2}\right)$	$MPE \ limit \\ (S_{Lim}) \\ (\frac{mW}{cm^2})$	$\begin{array}{c} COMPLIANCE \\ (S_{eq} < S_{Lim}) \end{array}$
Scenario 1	Bluetooth	76,43	20,00	0,0152	1,0000	COMPLIANT
Scenario 2	WLAN	2000,00	20,00	0,3979	1,0000	COMPLIANT
Scenario 3	WLAN	2000,00	20,00	0,3979	1,0000	COMPLIANT
Scenario 3	Bluetooth	76,43	20,00	0,0152	1,0000	COMPLIANT
Scenario 4	WiMAX	2000,00	20,00	0,3979	1,0000	COMPLIANT
Scenario 5	WiMAX	2000,00	20,00	0,3979	1,0000	COMPLIANT
Scenario 3	Bluetooth	76,43	20,00	0,0152	1,0000	COMPLIANT
Scenario 6	WLAN	2000,00	20,00	0,3979	1,0000	COMPLIANT
Scenario 6	WiMAX	2000,00	20,00	0,0081	1,0000	COMPLIANT
Scenario 7	WLAN	2000,00	20,00	0,3979	1,0000	COMPLIANT
	WiMAX	2000,00	20,00	0,0112	1,0000	COMPLIANT
	Bluetooth	76,43	20,00	0,0152	1,0000	COMPLIANT

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B.3. RF EXPOSURE ASSESSMENT – COLLOCATION CONSIDERATIONS

B.3.1. INTRODUCTION

In situations where simultaneous exposure to fields of different equipment and frequencies occurs, the possibility that these exposures will be additive in their effects must be considered. Calculations based on this additivity are performed by the sum of relative exposure for each equipment according to the following compliance criteria:

$$\sum_{1}^{N} \frac{S_{eqn}}{S_{Limn}} = \frac{S_{eq1}}{S_{Lim1}} + \frac{S_{eq2}}{S_{Lim2}} + \dots + \frac{S_{eqN}}{S_{LimN}} \le 1$$

where:

 S_{eq} is the power density of the electromagnetic field caused, at a given distance (evaluation distance), by a specific equipment transmitting at a defined frequency.

 S_{Lim} is the MPE limit for the evaluated transmission frequency.

B.3.2. FCC REQUIREMENTS

RELATIVE EXPOSURE FOR F3607gw ERICSSON BROADBAND MODULE

Frequency Band	Mode	Frequency Range (MHz)	$S_{ m eq}$	S_{Lim}	$\frac{S_{eq}}{S_{Lim}}$
GSM 850	GSM/GPRS	824,2 - 848,8	0,2414	0,5495	0,4393
GSM 850	EDGE	824,2 - 848,8	0,2414	0,5495	0,4393
FDD V	WCDMA/HSDPA	826,4 - 846,6	0,0892	0,5509	0,1619
TDD V	HSUPA	826,4 - 846,6	0,0586	0,5509	0,1063
PCS 1900	GSM/GPRS	1850,2 - 1909,8	0,1505	1,0000	0,1505
PCS 1900	EDGE	1850,2 - 1909,8	0,1499	1,0000	0,1499
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	0,1256	1,0000	0,1256
LDD II	HSUPA	1852,4 - 1907,6	0,0704	1,0000	0,0704

RELATIVE EXPOSURE FOR SECONDARY TRANSMITTERS

SCENARIO	Type of transmitter	$S_{ m eq}$	\mathbf{S}_{Lim}	$rac{\mathbf{S}_{\mathrm{eq}}}{\mathbf{S}_{\mathrm{Lim}}}$
Scenario 1	Bluetooth	0,0152	1,0000	0,0152
Scenario 2	WLAN	0,3979	1,0000	0,3979
Scenario 3	WLAN	0,3979	1,0000	0,3979
	Bluetooth	0,0152	1,0000	0,0152
Scenario 4	WiMAX	0,3979	1,0000	0,3979
Garania 5	WiMAX	0,3979	1,0000	0,3979
Scenario 5	Bluetooth	0,0152	1,0000	0,0152

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Scenario 6	WLAN	0.3070	1,0000	0,3979	
Scenario o	WiMAX	0,3979 VLAN ViMAX 0,3979	1,0000	0,3979	
Scenario 7	WLAN	0.2070	1,0000	0,3979	
	WiMAX	0,3979	1,0000		
	Bluetooth	0,0152	1,0000	0,0152	

SIMULTANEOUS EXPOSURE

SCENARIO	Equip	$\frac{S_{eq}}{S_{Lim}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}} < 1$		
Scenario 1	Primary transmitter	Ericsson F3607gw	0,4393	0,4545	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
Scenario 2	Primary transmitter	Ericsson F3607gw	0,4393	0,8372	COMPLIANT	
Scenario 2	Secundary transmitter	WLAN	0,3979	0,6372	COMPLIANT	
	Primary transmitter	Ericsson F3607gw	0,4393			
Scenario 3	Secundary transmitter	WLAN	0,3979	0,8524	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
Scenario 4	Primary transmitter	Ericsson F3607gw	0,4393	0,8372	COMPLIANT	
Scenario 4	Secundary transmitter	WiMAX	0,3979	0,6372	COMPLIANT	
	Primary transmitter	Ericsson F3607gw	0,4393			
Scenario 5	Secundary transmitter	WiMAX	0,3979	0,8524	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
	Primary transmitter	Ericsson F3607gw	0,4393			
Scenario 6	Secundary transmitter	WLAN	0,3979	0,8372	COMPLIANT	
	Secundary transmitter	WiMAX	0,3979			
	Primary transmitter	Ericsson F3607gw	0,4393			
Scenario 7	Secundary transmitter	WLAN	0,3979	0.0534	COMPLIANT	
	Secundary transmitter	WiMAX	0,37/7	0,8524	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			

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B.3.3. EUROPEAN UNION REQUIREMENTS

RELATIVE EXPOSURE FOR F3607gw ERICSSON BROADBAND MODULE

Frequency Band	Mode	Frequency Range (MHz)	$S_{ m eq}$	S_{Lim}	$\frac{\mathbf{S}_{\mathrm{eq}}}{\mathbf{S}_{\mathrm{Lim}}}$
E-GSM 900	GSM/GPRS	880,2 - 914,8	0,1957	0,4401	0,4448
E-GSM 900	EDGE	880,2 - 914,8	0,0663	0,4401	0,1507
DCS 1800	GSM/GPRS	1710,2 - 1784,8	0,1402	0,8551	0,1639
	EDGE	1710,2 - 1784,8	0,0753	0,8551	0,0880
EDD I	WCDMA/HSDPA	1922,4 - 1977,6	0,1040	0,9612	0,1082
FDD I	HSUPA	1922,4 - 1977,6	0,0685	0,9612	0,0713

RELATIVE EXPOSURE FOR SECONDARY TRANSMITTERS

SCENARIO	Type of transmitter	$S_{ m eq}$	S_{Lim}	$\frac{\mathbf{S}_{\mathrm{eq}}}{\mathbf{S}_{\mathrm{Lim}}}$	
Scenario 1	Bluetooth	0,0152	1,0000	0,0152	
Scenario 2	WLAN	0,3979	1,0000	0,3979	
Scenario 3	WLAN	0,3979	1,0000	0,3979	
Scenario 3	Bluetooth	0,0152	1,0000	0,0152	
Scenario 4	WiMAX	0,3979	1,0000	0,3979	
Commis 5	WiMAX	0,3979	1,0000	0,3979	
Scenario 5	Bluetooth	0,0152	1,0000	0,0152	
Companie (WLAN	0.2070	1,0000	0.2070	
Scenario 6	WiMAX	0,3979	1,0000	0,3979	
	WLAN	0.2070	1,0000	0.2070	
Scenario 7	WiMAX	0,3979	1,0000	0,3979	
	Bluetooth	0,0152	1,0000	0,0152	

SIMULTANEOUS EXPOSURE

SCENARIO	Equipment		$\frac{S_{eq}}{S_{Lim}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}} < 1$	
Scenario 1	Primary transmitter	Ericsson F3607gw	0,4448	0,4600	COMPLIANT	
Scenario 1	Secundary transmitter	Bluetooth	0,0152	0,4000	COMPLIANT	
Scenario 2	Primary transmitter	Ericsson F3607gw	0,4448	0,8426	COMPLIANT	
Scenario 2	Secundary transmitter	WLAN	0,3979	0,0420	COMI LIANT	

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	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 3	Secundary transmitter	WLAN	0,3979	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
Scenario 4	Primary transmitter	Ericsson F3607gw	0,4448	0,8426	COMPLIANT	
Scenario 4	Secundary transmitter	WiMAX	0,3979	0,0420	COMPLIANT	
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 5	Secundary transmitter	WiMAX	0,3979	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 6	Secundary transmitter	WLAN	0,3979	0,8426	COMPLIANT	
	Secundary transmitter	WiMAX	0,3979			
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 7	Secundary transmitter	WLAN 0.2070		0.0570	COMPLIANT	
	Secundary transmitter	WiMAX	0,3979	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			

B.3.4. AUSTRALIA REQUIREMENTS

RELATIVE EXPOSURE FOR F3607gw ERICSSON BROADBAND MODULE

Manufacturer	Model name	Frequency range (MHz)	$S_{ m eq}$	S_{Lim}	$\frac{\mathbf{S}_{\mathrm{eq}}}{\mathbf{S}_{\mathrm{Lim}}}$
FDD V	WCDMA/HSDPA	826,4 - 846,6	0,0892	0,4132	0,2159
TDD V	HSUPA	826,4 - 846,6	0,0586	0,4132	0,1418
E-GSM 900	GSM/GPRS	880,2 - 914,8	0,1957	0,4401	0,4448
E-GSM 900	EDGE	880,2 - 914,8	0,0663	0,4401	0,1507
DCS 1800	GSM/GPRS	1710,2 - 1784,8	0,1402	0,8551	0,1639
DCS 1800	EDGE	1710,2 - 1784,8	0,0753	0,8551	0,0880
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	0,1040	0,9612	0,1082
LDD I	HSUPA	1922,4 - 1977,6	0,0685	0,9612	0,0713

RELATIVE EXPOSURE FOR SECONDARY TRANSMITTERS

SCENARIO	Type of transmitter	$\mathbf{S}_{\mathbf{eq}}$	\mathbf{S}_{Lim}	$rac{ extbf{S}_{ ext{eq}}}{ extbf{S}_{ ext{Lim}}}$
Scenario 1	Bluetooth	0,0152	1,0000	0,0152
Scenario 2	WLAN	0,3979	1,0000	0,3979
Scenario 3	WLAN	0,3979	1,0000	0,3979
Scenario 3	Bluetooth	0,0152	1,0000	0,0152
Scenario 4	WiMAX	0,3979	1,0000	0,3979

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Scenario 5	WiMAX	0,3979	1,0000	0,3979	
Scenario 3	Bluetooth	0,0152	1,0000	0,0152	
Scenario 6	WLAN	0,3979	1,0000	0,3979	
Scenario o	WiMAX	0,3979	1,0000	0,3979	
	WLAN	0,3979	1,0000	0,3979	
Scenario 7	WiMAX	0,3979	1,0000	0,3979	
	Bluetooth	0,0152	1,0000	0,0152	

SIMULTANEOUS EXPOSURE

SCENARIO	Equip	oment	Maximum S_{eq}	$\frac{S_{Pri}}{S_{Lim_Pri}} +$	$\frac{S_{Pri}}{S_{Lim_Pri}} + $	
	^ ^		$\overline{S_{ ext{Lim}}}$	$\sum \frac{S_{Sec}}{S_{Lim_Sec}}$	$\sum \frac{S_{\text{Sec}}}{S_{\text{Lim_Sec}}} < 1$	
Scenario 1	Primary transmitter	Ericsson F3607gw	0,4448	0,4600	COMPLIANT	
Scenario 1	Secundary transmitter	Bluetooth	0,0152	0,4000	COMI LIANT	
Scenario 2	Primary transmitter	Ericsson F3607gw	0,4448	0,8426	COMPLIANT	
Scenario 2	Secundary transmitter	WLAN	0,3979	0,0420	COMILIANI	
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 3	Secundary transmitter	WLAN	0,3979	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
Scenario 4	Primary transmitter	Ericsson F3607gw	0,4448	0,8426	COMPLIANT	
ocenano 4	Secundary transmitter	WiMAX	0,3979	0,0420		
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 5	Secundary transmitter	WiMAX	0,3979	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 6	Secundary transmitter	WLAN	0,3979	0,8426	COMPLIANT	
	Secundary transmitter	WiMAX	0,3979			
	Primary transmitter	Ericsson F3607gw	0,4448			
Scenario 7	Secundary transmitter	WLAN	0,3979	A 0570	COMDITANT	
Scenario /	Secundary transmitter	WiMAX	0,37/7	0,8578	COMPLIANT	
	Secundary transmitter	Bluetooth	0,0152			

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B.3.5. VODAFONE REQUIREMENTS

RELATIVE EXPOSURE FOR F3607gw ERICSSON BROADBAND MODULE

Manufacturer	Model name	Frequency range (MHz)	S_{eq}	S_{Lim}	$\frac{S_{eq}}{S_{Lim}}$
GSM 850	GSM/GPRS	824,2 - 848,8	0,2414	0,4121	0,5857
GSWI 630	EDGE	824,2 - 848,8	0,2414	0,4121	0,5857
FDD V	WCDMA/HSDPA	826,4 - 846,6	0,0892	0,4132	0,2159
FDD V	HSUPA	826,4 - 846,6	0,0586	0,4132	0,1418
FDD VI	WCDMA/HSDPA	832,4 - 837,6	0,0911	0,4162	0,2188
	HSUPA	832,4 - 837,6	0,0513	0,4162	0,1232
E-GSM 900	GSM/GPRS	880,2 - 914,8	0,1957	0,4401	0,4448
E-GSWI 900	EDGE	880,2 - 914,8	0,0663	0,4401	0,1507
DCS 1800	GSM/GPRS	1710,2 - 1784,8	0,1402	0,8551	0,1639
DCS 1600	EDGE	1710,2 - 1784,8	0,0753	0,8551	0,0880
PCS 1900	GSM/GPRS	1850,2 - 1909,8	0,1505	0,9251	0,1627
1 CS 1900	EDGE	1850,2 - 1909,8	0,1499	0,9251	0,1620
FDD II	WCDMA/HSDPA	1852,4 - 1907,6	0,1256	0,9262	0,1356
<u> Ի</u> ՄՄ II	HSUPA	1852,4 - 1907,6	0,0704	0,9262	0,0760
FDD I	WCDMA/HSDPA	1922,4 - 1977,6	0,1040	0,9612	0,1082
LDD I	HSUPA	1922,4 - 1977,6	0,0685	0,9612	0,0713

RELATIVE EXPOSURE FOR SECONDARY TRANSMITTERS

SCENARIO	Type of transmitter	$S_{ m eq}$	\mathbf{S}_{Lim}	$rac{\mathbf{S}_{\mathrm{eq}}}{\mathbf{S}_{\mathrm{Lim}}}$	
Scenario 1	Bluetooth	0,0152	1,0000	0,0152	
Scenario 2	WLAN	0,3979	1,0000	0,3979	
Scenario 3	WLAN	0,3979	1,0000	0,3979	
Scellario 3	Bluetooth	0,0152	1,0000	0,0152	
Scenario 4	WiMAX	0,3979	1,0000	0,3979	
Scenario 5	WiMAX	0,3979	1,0000	0,3979	
Scenario 3	Bluetooth	0,0152	1,0000	0,0152	
Scenario 6	WLAN	0,3979	1,0000	0.2070	
Scenario 0	WiMAX	0,3979	1,0000	0,3979	
	WLAN	0.2070	1,0000	0,3979	
Scenario 7	WiMAX	0,3979	1,0000	0,3979	
	Bluetooth	0,0152	1,0000	0,0152	

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SIMULTANEOUS EXPOSURE

SCENARIO	Equipment		$\frac{S_{eq}}{S_{Lim}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}}$	$\frac{S_{Pri}}{S_{Lim_Pri}} + \\ \sum \frac{S_{Sec}}{S_{Lim_Sec}} < 1$
Scenario 1	Primary transmitter	Ericsson F3607gw	0,5857	0,6009	COMPLIANT
Scenario 1	Secundary transmitter	Bluetooth	0,0152		
Scenario 2	Primary transmitter	Ericsson F3607gw	0,5857	0,9836	COMPLIANT
Scenario 2	Secundary transmitter	WLAN	0,3979	0,9830	
Scenario 3	Primary transmitter	Ericsson F3607gw	0,5857	0,9988	COMPLIANT
	Secundary transmitter	WLAN	0,3979		
	Secundary transmitter	Bluetooth	0,0152		
Scenario 4	Primary transmitter	Ericsson F3607gw	0,5857	0,9836	COMPLIANT
	Secundary transmitter	WiMAX	0,3979		
Scenario 5	Primary transmitter	Ericsson F3607gw	0,5857	0,9988	COMPLIANT
	Secundary transmitter	WiMAX	0,3979		
	Secundary transmitter	Bluetooth	0,0152		
Scenario 6	Primary transmitter	Ericsson F3607gw	0,5857	0,9836	COMPLIANT
	Secundary transmitter	WLAN	0.2070		
	Secundary transmitter	WiMAX	0,3979		
Scenario 7	Primary transmitter	Ericsson F3607gw	0,5857	0,9988	COMPLIANT
	Secundary transmitter	WLAN	0.2070		
	Secundary transmitter	WiMAX	0,3979		
	Secundary transmitter	Bluetooth	0,0152		

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